

Form C-104
Rev. 02/2009

VALUE ENGINEERING CHANGE PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

☒ Conceptual Proposal ☐ Final Proposal Date 6-21-10
Contract ID 091218-408 Job No. J4I1382
County Clay I-35 Original Bid Cost 23,114,454.87
Contractor Idcker, Inc. By Cody Phillips
Designed By Gregory Anderson Phone 816-364-3970
VECP# 10-63 (to be completed by C.O.) VECP ☒ or PDVECP ☐

1. Description of existing requirements and proposed change(s). Advantages/Disadvantages
Proposed VECP to install French Drains in lieu of pipe aggregate edge drains in certain full depth areas on this project. The French Drain is an acceptable substitute and the advantages are that this will save time and money. Please see attached typical section.

2. Estimate of reduction in construction costs. \$139,101.05

3. Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.
None.

4. Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.

6-21-10

(date)

5. Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.

6-28-10

(date)

Should not be any

(effect)

6. Dates of any previous or concurrent submission of the same proposal.

n/a

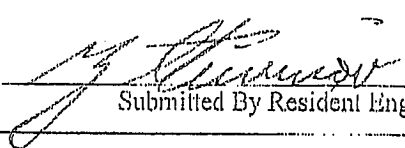
(date and/or dates)

Additional Comments:
Please see attached worksheet

**** Portion Below This Line To Be Filled Out by MoDOT ****

Comments:

PLEASE SEE ATTACHED MEMO


Submitted By Resident Engineer

6.25.10
Date

Comments:

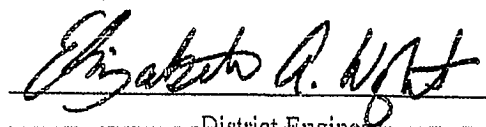
IN CONSIDERATION OF THE PROPOSAL AND
AFTER DISCUSSIONS WITH DI, FAVORABLE RESULTS
HAVE BEEN REALIZED IN THE FIELD. THIS IS
CONSISTENT WITH VE PROPOSAL ON J4P2211



Approval
Recommended



Rejection
Recommended


District Engineer

POD

6/30/10
Date

Comments:

SEE ATTACHED E-MAIL FROM
KEVIN RUGG



Approval
Recommended



Rejection
Recommended

Federal Highway Administration
Required for FHWA Full Oversight Projects

Date

Comments:

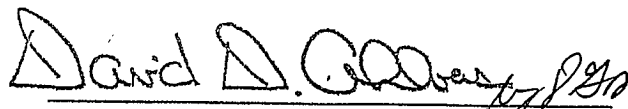
NOT AN EQUIVALENT FINISHED PRODUCT



Approval

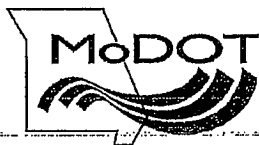


Rejection


State Construction and Materials Engineer

7-14-200

Date



MEMORANDUM

Missouri Department of Transportation
Construction Division, District 4
Nashua Project Office

TO: Perry Allen-4co
FROM: Greg Stervinou
Resident Engineer
DATE: June 25, 2010
SUBJECT: PDVECP 25% Share
Job No. J4I1382
Contract ID 091218-408
I-35, Clay County

Designer comments

- The VE proposal does not have drainage that is running parallel to the edge of pavement to carry water to each outlet
- The VE proposal does not allow the drains to be cleaned out
If the fines passing the 200 sieve are over 18% the drain will clog within a short period of time (5 yrs) and no way to clean them out and this can cause premature pavement failure.

Pavement specialist comments

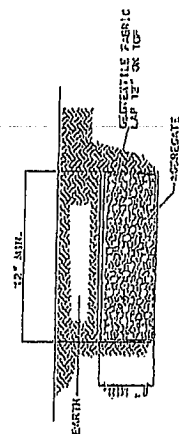
Aggregate French drains were mostly intended (by us) as a retrofit treatment to moderately facilitate drainage in older pavements with trapped water. Newly constructed pavements can more fully benefit from the positive drainage features of an open pipe system.

Resident Engineer

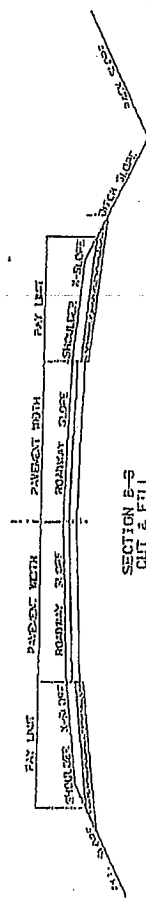
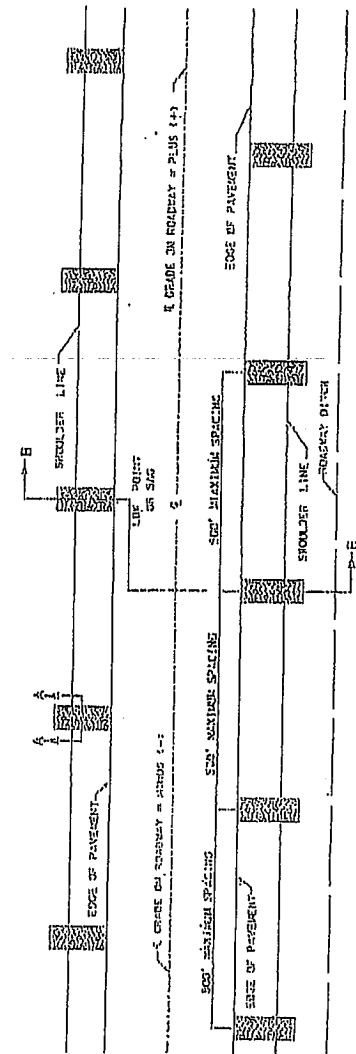
This option was used on the I-35 project in D-1 and was accepted as a VE. Currently, the aggregate underdrains are functioning as designed.

On this project, the rubblized PCCP rock base extends under the full-width of the pavement and the A-2 shoulders, typically 38 feet wide. The finished grade typical section is a soil cap from the shoulder to the toe of the slope. The rubblized PCCP rock base is capped and sealed with millings in these full depth sections. In my opinion, the gradation of the rubblized PCCP (accepted by visual inspection) wouldn't clog the aggregate underdrains. The rubblized PCCP is already draining the pavement to the interface with the soil cap and then the underdrains are providing a conduit for this water to reach the ditch.

gls

[illegible]

SECTION A-A

SECTION 5-5
CUT & FILL
ELEVATION

Σελ. 10

AGGREGATE UNDERDRAIN

TESTS AND TRIALS

[illegible]



IDEKER, INC.

Earth Moving • Concrete • Asphalt

Job # J41382
Contract I.O. 091218-408
Route 35
County Clay

French Drain VE Proposal Summary

Quantities that will Underrun

Description	Quantity	Units	Unit Price	Total
Pipe Aggregate Edge Drain	27453	lf	\$3.85	\$105,694.05
Outlet Pipe Splash Pad	127	ea	\$495.00	\$62,865.00
Total				\$168,559.05

Estimated quantities that need to be added

Description	Quantity	Units	Unit Price	Total
French Drains	715	lf	\$41.20	\$29,458.00
Total				\$29,458.00

Total Savings In Construction Costs

\$139,101.05



<Kevin.Irving@dot.gov>

07/07/2010 12:46 PM

To <Dennis.Bryant@modot.mo.gov>

cc <Mike.McGee@dot.gov>, <Edward.Stephen@dot.gov>

bcc

Subject RE: VE#2, J4I1382, Clay, I-35

Dennis,

In consideration of this VE proposal, I offer the following:

I am puzzled by the District's positive recommendation for this VE. The Project Manager and Central Office Pavement Specialist recommended against this VE, and additionally our pavement and materials specialist (Mike McGee) concurred with their recommendations after his review. Given the expertise involved and the valid concerns presented by these individuals, I do not concur with the VE proposal. Given these concerns, it would not be prudent to risk the long term drainage performance of this Interstate pavement to save \$70K to \$100K.

Thanks for the opportunity to comment,
Kevin

-----Original Message-----

From: Dennis.Bryant@modot.mo.gov [mailto:Dennis.Bryant@modot.mo.gov]

Sent: Wednesday, July 07, 2010 9:25 AM

To: Irving, Kevin (FHWA)

Subject: Fw: VE#2, J4I1382, Clay, I-35

Kevin-

Could you give us an opinion on this one? At best it is a practical design VE.

Thanks!

----- Forwarded by Dennis G Bryant/SC/MODOT on 07/07/2010 09:23 AM -----

Perry J

Allen/D4/MODOT

To

06/30/2010 11:24

Dennis G Bryant/SC/MODOT@MODOT

AM

cc

Subject

VE#2, J4I1382, Clay, I-35

Dennis

Please process accordingly.

Thanks

(See attached file: Ideker VE 2010-2.pdf)

Perry J. Allen Jr. P.E.
District Construction / Materials Engineer District 4 MoDOT 600 NE
Colbern Road Lee's Summit, MO 64086 816.622.6340

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- ☐ Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's, ect.)
- ☐ TCP/MOT
- ☒ Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ☐ Signal/Lighting/ITS
- ☐ Misc. _____

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

_____ Use French drains in lieu of pipe aggregate edge drains.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.

_____ Scan proposal only.